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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,505	05/05/2006	Miodrag J. Mihaljevic	287806US8PCT	9441
22850	7590	08/19/2009	EXAMINER	
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314			ZIA, SYED	
			ART UNIT	PAPER NUMBER
			2431	
			NOTIFICATION DATE	DELIVERY MODE
			08/19/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/578,505	Applicant(s) MIHALJEVIC ET AL.	
	Examiner SYED ZIA	Art Unit 2431	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to amendment filed on May 5, 2006. Claims 1-11 are pending for consideration.

Information Disclosure Statement

The information disclosure statement filed May 5, 2006 has been considered.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claim 9 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 9 is rejected under 35 U.S.C. 101 based on Supreme Court precedent and recent Federal Circuit decisions, a 35 U.S.C § 101 process must (1) be tied to a particular machine or (2) transform underlying subject matter (such as an article or materials) to a different state or thing. In re Bilski et al, 88 USPQ 2d 1385 CAFC (2008); Diamond v. Diehr, 450 U.S. 175, 184 (1981); Parker v. Flook, 437 U.S. 584, 588 n.9 (1978); Gottschalk v. Benson, 409 U.S. 63, 70 (1972); Cochrane v. Deener, 94 U.S. 780,787-88 (1876).

Art Unit: 2431

An example of a method claim that would not qualify as a statutory process would be a claim that recited purely mental steps. Thus, to qualify as a § 101 statutory process, the claim should positively recite the particular machine to which it is tied, for example by identifying the apparatus that accomplishes the method steps, or positively recite the subject matter that is being transformed, for example by identifying the material that is being changed to a different state.

Here, applicant's method steps are not tied to a particular machine and do not perform a transformation. Thus, the claims are non-statutory.

The mere recitation of the machine in the preamble with an absence of a machine in the body of the claim fails to make the claim statutory under 35 USC 101. *Note the Board of Patent Appeals Informative Opinion Ex parte Langemyer et al.*

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Regarding claim 1-11: it's not clear to examiner what does higher randomness means in the context of these claims. Examiner could find the description or definition of this term in the disclosure.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-11 are rejected under 35 U.S.C. 102 (e) as being anticipated by Shackleford et al. (U. S. Patent 6,985,918).

1. Regarding Claim 1 Shackleford teach and describe an apparatus for generating pseudorandom sequences comprising: cellular automata of a first type for generating a first sequence with higher randomness; cellular automata of a second type for generating a second sequence with predetermined lower bound on the period; and adders for performing bit-to-bit mod2 sum of the first sequences and the second sequences (col.3 line 10 to col.8 line 30).

2. Regarding Claim 9 Shackleford teach and describe a method for generating pseudorandom sequences using cellular automata comprising: generating a first sequence with higher randomness; generating a second sequence with predetermined lower bound on the period; and performing bit-to-bit mod2 sum of the first sequences and the second sequences (col.3 line 10 to col.8 line 30).

Art Unit: 2431

3. Regarding Claim 10 Shackleford teach and describe a computer program for causing a computer to execute a method for generating pseudorandom sequences using cellular automata, the computer program wherein: the method includes generating a first sequence with higher randomness; generating a second sequence with predetermined lower bound on the period; and performing bit-to-bit mod2 sum of the first sequences and the second sequences (col.3 line 10 to col.8 line 30).

4. Regarding Claim 11 Shackleford teach and describe a recording medium storing a computer program for causing a computer to execute a method for generating pseudorandom sequences using cellular automata, the recording medium wherein: the method includes generating a first sequence with higher randomness; generating a second sequence with predetermined lower bound on the period; and performing bit-to-bit mod2 sum of the first sequences and the second sequences (col.3 line 10 to col.8 line 30).

5. Claims 2-8 are rejected applied as above rejecting Claims 1, 9, and 10-11. Furthermore, Shackleford teach and describe a method for generating pseudorandom sequences using cellular automata, wherein:

As per claim 2, the cellular automata of a first type is two-dimensional cellular automata; the cellular automata of a second type is 2-by-L cellular automata; and the summation results from the adders are outputted as the pseudorandom sequences (col.4 line 25 to line 60)

Art Unit: 2431

As per claim 3, further comprising: cellular automata of a third type for generating a third sequence, the cellular automata of a third type having cells whose states can be computed based on corresponding cell control word and/or rule control word; wherein the cell control word is generated by the cellular automata of a second type; the rule control word is generated by the cellular automata of a first type; and the adders for performing bit-to-bit mod2 sum of the first, the second and the third sequences (col.4 line 45 to col.6 line 44).

As per claim 4, the summation results from the adders are outputted as the pseudorandom sequences (col.4 line 25 to line 60, and col.6 line 8 to col.7 line 55).

As per claim 5, further comprising: a block for performing nonlinear mapping on the summation results from the adders; and a block for perform non-uniform decimation on the results of the nonlinear mapping; wherein the decimated result is outputted as the pseudorandom sequence (col.4 line 45 to col.6 line 44).

As per claim 6, each of the blocks includes at least one nonlinear function (col.4 line 45 to col.6 line 44).

As per claim 7, the block for performing nonlinear mapping includes at least one look-up table for nonlinear mapping based on the Latin squares (col.4 line 45 to col.7 line 55)..

As per claim 8, a cryptographic processor for encrypting data using pseudorandom sequences; and a pseudorandom sequence generator for generating the pseudorandom sequences; wherein the pseudorandom number generator is configured to include the apparatus according to claim 1 (col.4 line 45 to col.6 line 44).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Syed Zia whose telephone number is 571-272-3798. The examiner can normally be reached on 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SZ
August 16, 2009
/Syed Zia/
Primary Examiner, Art Unit 2431